

Blood kisspeptin level test may identify pregnant women at high risk for miscarriage

June 23 2014

Measuring pregnant women's blood kisspeptin levels early in their pregnancy may effectively predict their risk of miscarriage, a new study finds. The results were presented Saturday at ICE/ENDO 2014, the joint meeting of the International Society of Endocrinology and the Endocrine Society in Chicago.

"We show that, even in [women](#) with no symptoms of [miscarriage](#), a single blood test for kisspeptin more accurately predicted the risk of miscarriage compared with the hCG [human chorionic gonadotropin] levels that were measured at the same time," said lead study author Ali Abbara, MBBS BSc MRCP, clinical research fellow in the Department of Investigative Medicine at Imperial College London, United Kingdom. "Being better able to identify women at high risk of miscarriage may allow for improved monitoring and management of these pregnancies."

Miscarriage affects 1 in 5 pregnancies, and most miscarriages occur early in pregnancy, before the woman is able to carry her fetus for 24 weeks. Kisspeptins are peptides encoded by the KISS1 gene, which is highly prevalent in the placenta. Kisspeptins circulating in the blood increase dramatically during normal human pregnancy, to several thousand times non-pregnancy levels, which makes them a novel predictive marker for assessing the risk of later complications.

This is the first study showing that a single plasma kisspeptin level test during early [pregnancy](#) can identify the risk for miscarriage in women who have no symptoms. Dr. Abbara and his colleagues evaluated plasma

kisspeptin levels in 993 asymptomatic [pregnant women](#) who were, on average, 11 weeks pregnant and were visiting their doctor for a routine prenatal exam at an urban academic obstetric center.

The women provided a single blood sample and the researchers measured each woman's levels of kisspeptin and hCG (a hormone commonly used to diagnose possible miscarriage and other abnormalities) and compared them.

The researchers found that, in women who miscarried, blood kisspeptin levels, corrected for gestation at time of blood test, were 60% lower than the levels in women who later had healthy pregnancies. Compared with hCG, which was 36% lower in women who miscarried, blood kisspeptin levels more accurately predicted future miscarriage.

They also found that plasma kisspeptin over 1,306 picomoles per liter was strongly associated with a lower risk of miscarriage.

"Future work will assess whether it is possible to intervene to prevent miscarriage in women identified as being at high risk of this complication by a low [blood](#) kisspeptin level," Dr. Abbara observed.

Provided by The Endocrine Society

Citation: Blood kisspeptin level test may identify pregnant women at high risk for miscarriage (2014, June 23) retrieved 10 May 2024 from <https://medicalxpress.com/news/2014-06-blood-kisspeptin-pregnant-women-high.html>

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